UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,559	09/15/2003	David Darden Chambliss	SJO920030006US1	3819

46917 7590 04/10/2007	**EXAMINER**
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ART UNIT	PAPER NUMBER
2109	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/663,559	CHAMBLISS ET AL.
	Examiner	Art Unit
	William J. Goodchild	2109

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _15 September 2003_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-49_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-49_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _15 September 2003_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _09/15/2003_.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

Drawings

1.   The drawings are objected to because:

Figure 1, item 18 (Service Level Agreement (SLA) Server) is referred to within the specification as item 16, except on page 9, where it is referred to as item 18.

Figure 6, item 130 is referred to as a 'Collection Interval', on page 9 of the specification item 130 is referred to as the 'Retention Interval'. It is unclear if this is the same item.

Figure 9, item 204 is not listed within the specification.

Figure 12, item 288 is not listed within the specification.

Figure 13, item 300 is a new number for SLA Client which was defined in Figure 1 as item 28.

Figure 13, item 320 is a new number for SLA Server which was defined in Figure 1 as item 18, but within the specification as item 16.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2.   The disclosure is objected to because of the following informalities:

Page 1, line 14, the phrase "such as or one or more" is unclear.

Page 3, the drawings 14a, 14b, 14c and 15 are not described within the BRIEF DESCRIPTION OF THE DRAWINGS.

Page 7, line 5, has the phrase "ser4vice", it is suggested to replace the phrase with –service--.

Page 9, line 8, the phrase "SLA server 18" is unclear. On Figure 1, the SLA server is identified as item 18, yet as described within the specification it is referred to as item 16 except on page 9, line 8, where it is described as item 18.

Page 9, line 17, the phrase "SLA database 18" is unclear. Figure 1 identifies the

SLA database as item 20.

Page 14, line 4, the phrase "the admin client 18" is unclear. An admin client has

not been defined within the drawings, and it is listed as item 18, which in figure 1 is

listed as the 'SLA Server'.

Page 14, line 5, the phrase "SLA server 16 and SLA client 18" is unclear. The

SLA client is listed as per Figure 1 as item 28.

Appropriate correction is required.

Claim Objections

3.   Claims 1-49 are objected to for the following informalities:

Claim 1, line 12, the phrase "performance criteria" has been defined in claim 1,

line 7, it is suggested to change the phrase to –the performance criteria--, in order to

improve the clarity of the claim language.

Claim 2, line 6, the phrase "a at least one XML document" has been defined in

claim 2, line 2, it is suggested to change the phrase to –the at least one XML document-

-, in order to improve the clarity of the claim language.

Claim 2, line 6, the phrase "the attributes" has not been previously recited in the

claim.

Claim 5, line 5, the phrase "each service level guarantee definitions" is unclear. In claim 1, line 9 the phrase is singular, in claim 5, line 5 it is now plural.

Claim 6, line 3, the phrase "at least one application service group" has been defined in claim 5, line 5, it is suggested to change the phrase to –the application service group— or –the at least one application service group--, in order to improve the clarity of the claim language.

Claim 8, line 1, the phrase "Input/Output (I/O) requests transmitted" has been defined in claim 1, line 11, it is suggested to change the phrase to –the Input/Output (I/O) requests transmitted--, in order to improve the clarity of the claim language.

Claim 8, line 6, the phrase "one service level guarantee definition" has been defined in claim 1, line 6, it is suggested to change the phrase to –the service level guarantee definition—or – the one service level guarantee definition--, in order to improve the clarity of the claim language.

Claim 10, line 2, the phrase "I/O paths" has been defined in claim 1, line 1, it is suggested to change the phrase to –the I/O paths--, in order to improve the clarity of the claim language.

Claim 10, line 4, the phrase "I/O paths" has been defined in claim 1, line 1, it is suggested to change the phrase to –the I/O paths--, in order to improve the clarity of the claim language.

Claim 12, line 1, the phrase "performance information" has been defined in claim 8, line 4, it is suggested to change the phrase to –the performance information--, in order to improve the clarity of the claim language.

Claim 12, line 2, the phrase "I/O paths" has been defined in claim 1, line 1, it is suggested to change the phrase to –the I/O paths--, in order to improve the clarity of the claim language.

Claim 12, line 4, the phrase "performance criteria" has been defined in claim 1, line 12, it is suggested to change the phrase to –the performance criteria--, in order to improve the clarity of the claim language.

Claim 12, line 4, the phrase "response time" has been defined in claim 12, line 2, it is suggested to change the phrase to –the response time--, in order to improve the clarity of the claim language.

Claim 12, line 4, the phrase "demand" has been defined in claim 12, line 2, it is suggested to change the phrase to –the demand--, in order to improve the clarity of the claim language.

Claim 13, line 1, the phrase "I/O demand" has been defined in claim 12, line 2, it is suggested to change the phrase to –the I/O demand--, in order to improve the clarity of the claim language.

Claim 15, line 2, recites the limitation "the demand criteria". There is insufficient antecedent basis for this limitation in the claim.

Claim 15, line 3, recites the limitation "the measured I/O response times". There is insufficient antecedent basis for this limitation in the claim.

Claim 15, line 3, recites the limitation "the response time criteria". There is insufficient antecedent basis for this limitation in the claim.

Claim 16, line 2, the phrase "I/O paths" has been defined in claim 1, line 1, it is suggested to change the phrase to –the I/O paths--, in order to improve the clarity of the claim language.

Claim 16, line 2, the phrase "hosts" has been defined in claim 1, line 2, it is suggested to change the phrase to –the hosts--, in order to improve the clarity of the claim language.

Claim 16, line 2, the phrase "storage volumes" has been defined in claim 1, line 2, it is suggested to change the phrase to –the storage volumes--, in order to improve the clarity of the claim language.

Claim 18, line 1, recites the limitation "the application service connections". There is insufficient antecedent basis for this limitation in the claim.

Claim 18, line 2, recites the limitation "the service level guarantees". There is insufficient antecedent basis for this limitation in the claim.

Claim 18, line 2, recites the limitation "the application service definitions". There is insufficient antecedent basis for this limitation in the claim.

Claim 19, line 15, the phrase "performance criteria" has been defined in claim 19, line 10, it is suggested to change the phrase to –the performance criteria--, in order to improve the clarity of the claim language.

Claim 20, line 4, the phrase "each service level guarantee definition" has been defined in claim 19, line 12, it is suggested to change the phrase to –the each service level guarantee definition--, in order to improve the clarity of the claim language.

Claim 20, line 8, recites the limitation "the attributes". There is insufficient antecedent basis for this limitation in the claim.

Claim 20, line 8, recites the limitation "the application service connection element". There is insufficient antecedent basis for this limitation in the claim.

Claim 20, line 9, recites the limitation "the connection". There is insufficient antecedent basis for this limitation in the claim.

Claim 22, line 2, the phrase "multiple service level guarantee definitions" has been defined in claim 21, line 2, it is suggested to change the phrase to –the multiple service level guarantee definitions--, in order to improve the clarity of the claim language.

Claim 22, line 3, the phrase "I/O requests transmitted" has been defined in claim 19, line 14, it is suggested to change the phrase to –the I/O requests transmitted--, in order to improve the clarity of the claim language.

Claim 23, line 5, the phrase "each service level guarantee definitions" has been defined in claim 19, line 12, it is suggested to change the phrase to –each of the service level guarantee definitions--, in order to improve the clarity of the claim language.

Claim 24, line 4, the phrase "each application service group" has been defined in claim 24, line 3, it is suggested to change the phrase to –the each application service group--, in order to improve the clarity of the claim language.

Claim 25, line 1, the phrase "Input/Output (I/O) requests transmitted" has been defined in claim 19, line 14, it is suggested to change the phrase to –the Input/Output (I/O) requests transmitted--, in order to improve the clarity of the claim language.

Claim 25, line 2, the phrase "performance criteria" has been defined in claim 19, line 10, it is suggested to change the phrase to –the performance criteria--, in order to improve the clarity of the claim language.

Claim 25, line 4, the phrase "I/O requests" has been defined in claim 19, line 4, it is suggested to change the phrase to –the I/O requests--, in order to improve the clarity of the claim language.

Claim 25, line 6, the phrase "one service level guarantee definition" has been defined in claim 19, line 9, it is suggested to change the phrase to –the one service level guarantee definition--, in order to improve the clarity of the claim language.

Claim 26, line 2, the phrase "operations" has been defined in claim 19, line 6, it is suggested to change the phrase to –the operations--, in order to improve the clarity of the claim language.

Claim 27, line 2, the phrase "I/O paths" has been defined in claim 19, line 1, it is suggested to change the phrase to –the I/O paths--, in order to improve the clarity of the claim language.

Claim 27, line 4, the phrase "I/O paths" has been defined in claim 19, line 1, it is suggested to change the phrase to –the I/O paths--, in order to improve the clarity of the claim language.

Claim 28, line 2, the phrase "I/O paths" has been defined in claim 19, line 1, it is suggested to change the phrase to –the I/O paths--, in order to improve the clarity of the claim language.

Claim 28, line 4, the phrase "performance criteria" has been defined in claim 19,

line 10, it is suggested to change the phrase to –the performance criteria--, in order to

improve the clarity of the claim language.

Claim 29, line 2, the phrase "hosts" has been defined in claim 19, line 2, it is

suggested to change the phrase to –the hosts--, in order to improve the clarity of the

claim language.

Claim 29, line 2, the phrase "storage volumes" has been defined in claim 19, line

2, it is suggested to change the phrase to –the storage volumes--, in order to improve

the clarity of the claim language.

Claim 31, line 13, the phrase "performance criteria" has been defined in claim 31,

line 8, it is suggested to change the phrase to –the performance criteria--, in order to

improve the clarity of the claim language.

Claim 32, line 6, the phrase "at least one XML document" has been defined in

claim 32, line 2, it is suggested to change the phrase to –the at least one XML

document--, in order to improve the clarity of the claim language.

Claim 32, line 6, recites the limitation "the attributes". There is insufficient

antecedent basis for this limitation in the claim.

Claim 32, line 6, recites the limitation "the application service connection

element". There is insufficient antecedent basis for this limitation in the claim.

Claim 34, line 2, the phrase "multiple service level guarantee definitions" has

been defined in claim 33, line 1, it is suggested to change the phrase to –the multiple

service level guarantee definitions--, in order to improve the clarity of the claim language.

Claim 34, line 3, the phrase "I/O requests transmitted" has been defined in claim 31, line 12, it is suggested to change the phrase to –the I/O requests transmitted--, in order to improve the clarity of the claim language.

Claim 34, line 4, the phrase "one connection" has been defined in claim 34, line 2, it is suggested to change the phrase to –the one connection--, in order to improve the clarity of the claim language.

Claim 36, line 3, the phrase "each application service group" has been defined in claim 36, line 2, it is suggested to change the phrase to –the each application service group--, in order to improve the clarity of the claim language.

Claim 36, line 6, recites the limitation "the application service connection". There is insufficient antecedent basis for this limitation in the claim.

Claim 37, line 4, the phrase "one application service group" has been defined in claim 35, line 6, it is suggested to change the phrase to –the one application service group--, in order to improve the clarity of the claim language.

Claim 38, line 2, the phrase "Input/Output (I/O) requests transmitted" has been defined in claim 31, line 12, it is suggested to change the phrase to –the Input/Output (I/O) requests transmitted--, in order to improve the clarity of the claim language.

Claim 38, line 3, the phrase "performance criteria" has been defined in claim 31, line 8, it is suggested to change the phrase to –the performance criteria--, in order to improve the clarity of the claim language.

Claim 38, line 4, the phrase "I/O requests" has been defined in claim 31, line 12, it is suggested to change the phrase to –the I/O requests--, in order to improve the clarity of the claim language.

Claim 38, line 6, the phrase "one service level guarantee definition" has been defined in claim 31, line 10, it is suggested to change the phrase to –the one service level guarantee definition--, in order to improve the clarity of the claim language.

Claim 38, line 7, the phrase "one application service connection definition" has been defined in claim 31, line 10, it is suggested to change the phrase to –the one application service connection definition--, in order to improve the clarity of the claim language.

Claim 39, line 3, the phrase "operations" has been defined in claim 31, line 4, it is suggested to change the phrase to –the operations--, in order to improve the clarity of the claim language.

Claim 40, line 3, the phrase "I/O paths" has been defined in claim 31, line 2, it is suggested to change the phrase to –the I/O paths--, in order to improve the clarity of the claim language.

Claim 40, line 5, the phrase "I/O paths" has been defined in claim 31, line 2, it is suggested to change the phrase to –the I/O paths--, in order to improve the clarity of the claim language.

Claim 41, line 2, the phrase "Input/Output (I/O) requests transmitted" has been defined in claim 31, line 12, it is suggested to change the phrase to –the Input/Output (I/O) requests transmitted--, in order to improve the clarity of the claim language.

Claim 42, line 1, the phrase "gathering performance information" has been
defined in claim 38, line 4, it is suggested to change the phrase to –the gathering
performance information--, in order to improve the clarity of the claim language.

Claim 42, line 2, the phrase "I/O paths" has been defined in claim 31, line 2, it is
suggested to change the phrase to –the I/O paths--, in order to improve the clarity of the
claim language.

Claim 42, line 4, the phrase "performance criteria" has been defined in claim 31,
line 8, it is suggested to change the phrase to –the performance criteria--, in order to
improve the clarity of the claim language.

Claim 43, line 1, the phrase "I/O demand" has been defined in claim 42, line 2, it
is suggested to change the phrase to –the I/O demand--, in order to improve the clarity
of the claim language.

Claim 47, line 12, the phrase "performance criteria" has been defined in claim 47,
line 7, it is suggested to change the phrase to –the performance criteria--, in order to
improve the clarity of the claim language.

Any claim not specifically addressed above, is being objected to as incorporating
the deficiencies of a claim upon which it depends.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

5.   Claims 1-49 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Independent claims 1, 19, 31 and 47 are drawn towards a method/system

comprising providing a definition for a connection, providing a definition indicating

performance criteria, associating a service level definition with a service connection

definition and monitoring the performance criteria of the I/O requests. In order for a

method/system claim to be statutory, it must result in useful, concrete and tangible

results. In this instance there is no result of the method/system claimed; providing a

definition for a connection, providing a definition indicating performance criteria,

associating a service level definition with a service connection definition and monitoring

the performance criteria of the I/O requests does not result in any real world change as

it does not create a tangible result specifying how the monitoring result is being used or

stored.

Claims 2-18, 20-30, 32-46 and 48-49, which are dependent on claims 1, 19, 31

and 47, do not add any tangible results to the claim and thus are rejected for the same

reason.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

7.   Claims 1, 3-4, 8-15, 19, 21-22, 25-28, 31, 33-34, 38-45 and 47-48 are rejected

under 35 U.S.C. 102(e) as being anticipated by Alvarez et al. (US Publication No.

2004/0236846).

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome

either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the

invention "by another," or by an appropriate showing under 37 CFR 1.131.

In reference to claims 1, 19, 31 and 47, Alvarez teaches a method and system

comprising:

a processing unit, (paragraph 0037, lines 3-5, a computer contains a processing

unit);

providing an application service connection definition for each connection from a

host to a storage volume, (paragraph 0044, lines 1-5, defined in an SLA);

providing at least one service level guarantee definition indicating performance

criteria to satisfy service requirements included in at least one service level agreement

with at least one customer for network resources, (paragraph 0044, lines 1-3 and

paragraph 0018, lines 5-6);

associating each service level guarantee definition with at least one application

service connection definition, (paragraph 0044, lines 1-5, defined in an SLA); and

monitoring whether Input/Output (I/O) requests transmitted through the multiple

I/O paths satisfy performance criteria indicated in the service level guarantee definition

associated with the I/O paths, (paragraph 0043, lines 7-9, determining is SLA is being

met).

In reference to claims 3, 21, 33 and 48, Alvarez teaches a method and system

comprising:

multiple service level guarantee definitions indicating different performance

criteria are associated with different sets of application service connection definitions,

(paragraph 0044, lines 1-5).

In reference to claims 4, 22 and 34, Alvarez teaches a method and system

comprising:

the application service definition for one connection may be associated with

multiple service level guarantee definitions, (paragraph 0044, lines 1-5),

wherein the monitoring comprises determining whether I/0 requests transmitted through one connection satisfy the performance criteria of all associated service level guarantee definitions, (paragraph 0044, lines 1-17).

In reference to claims 8, 25 and 38, Alvarez teaches a method and system comprising:

gathering performance information concerning I/O requests for each connection, (paragraph 0044, lines 1-5);

selecting one service level guarantee definition, (paragraph 0051, lines 1-6 and paragraph 0044, lines 3-5); and

for each connection identified by one application service connection definition associated with the selected service level guarantee definition, (paragraph 0051, lines 1-6 and paragraph 0044, lines 3-5),

comparing the gathered performance information for the connection with the performance criteria indicated in the selected service level guarantee definition, (paragraph 0044, lines 3-5).

In reference to claims 9, 26 and 39, Alvarez teaches a method and system comprising:

adjusting operations among the I/O paths represented by the application service connection definitions associated with the selected service level guarantee definition

if the gathered performance information for the I/O paths does not satisfy the

performance criteria, (paragraph 0044, lines 10-17 and 7-10).

In reference to claim 10, 27 and 40, Alvarez teaches a method and system

comprising:

adjusting the operations comprises:

determining 1/O paths that are over performing and under performing with

respect to the performance criteria, (paragraph 0044, lines 10-17 and 1-10); and

throttling the transmission of I/O requests through 1/O paths that are over

performing, (paragraph 0044, lines 10-17 and 1-10).

In reference to claim 11 and 41, Alvarez teaches a method and system

comprising:

throttling the transmissions comprises delaying the processing of I/O requests

transmitted through the over performing I/O paths, (paragraph 0044, lines 10-17).

In reference to claims 12, 28 and 42, Alvarez teaches a method and system

comprising:

gathering performance information for I/O paths comprises

determining an I/O response time and I/O demand at the I/O paths and

comparing the determined I/O response time and the I/O demand with performance

criteria for response time and demand in the selected service level guarantee definition, (paragraph 0044, lines 10-17 and 1-10).

In reference to claims 13 and 43, Alvarez teaches a method and system comprising:

I/O demand comprises I/O operations per second per unit of contracted storage capacity and I/O throughput per contracted storage capacity, (paragraph 0061, 0060 and 0059).

In reference to claim 14 and 44, Alvarez teaches a method and system comprising:

a connection is under performing if a percentage of I/O response times measured for the connection is less than a percentage guarantee indicated in the selected service level guarantee definition, (paragraph 0062 and 0059).

In reference to claim 15 and 45, Alvarez teaches a method and system comprising:

a connection is under performing if the I/O demand exceeds the demand criteria indicated in the service level guarantee definition, (paragraph 0044, lines 6-8) and

a sampling of the measured I/O response times is less than the response time criteria indicated in the service level guarantee definition, (paragraph 0044, lines 6-8 and paragraph 0043, lines 3-7).

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

9.   Claims 1, 5-6, 8, 16, 19, 23, 25, 29, 31, 35, 38, 47 and 49 are rejected under 35

U.S.C. 102(e) as being anticipated by Koclanes et al. (US Patent Application No.

2004/0243699).

        In reference to claim 1, 19, 31 and 47, Koclanes teaches a method and system

comprising:

        a processing unit, (paragraph 0098, lines 2-4 and paragraph 0096, lines 8-12);

        providing an application service connection definition for each connection from a

host to a storage volume, (paragraph 0033, lines 1-3);

        providing at least one service level guarantee definition indicating performance

criteria to satisfy service requirements included in at least one service level agreement

with at least one customer for network resources, (paragraph 0017, lines 4-5);

        associating each service level guarantee definition with at least one application

service connection definition, (paragraph 0037, lines 1-5); and

monitoring whether Input/Output (I/O) requests transmitted through the multiple

I/O paths satisfy performance criteria indicated in the service level guarantee definition

associated with the I/O paths, (paragraph 0048, lines 1-4).

In reference to claim 5, 23, 35 and 49, Koclanes teaches a method and system

comprising:

providing an application service group identifying a plurality of application service

connection definitions, (paragraph 0037, lines 1-3, metrics),

wherein associating the service level guarantee definition with the application

service connection definitions comprises, (paragraph 0050, lines 4-9)

associating each service level guarantee definitions with at least one application

service group, (paragraph 0037, lines 1-3, an SLO),

wherein the application service connection definitions identified in the application

service group are associated with the service level guarantee definitions with which their

application service group is associated, (paragraph 0037, lines 4-5, multiple SLO's to

make an SLA).

In reference to claim 6, Koclanes teaches a method and system comprising:

providing a service level commitment record associating one service level

agreement definition with at least one application service group, (paragraph 0037, lines

1-5, define the SLO from individual metrics).

In reference to claim 8, 25 and 38, Koclanes teaches a method and system comprising:

gathering performance information concerning I/O requests for each connection, (paragraph 0048, lines 1-4);

selecting one service level guarantee definition, (paragraph 0050, lines 4-9); and

for each connection identified by one application service connection definition associated with the selected service level guarantee definition, (paragraph 0050, lines 4-9),

comparing the gathered performance information for the connection with the performance criteria indicated in the selected service level guarantee definition, (paragraph 0050, lines 4-9).

In reference to claim 16 and 29, Koclanes teaches a method and system comprising:

the I/O paths are monitored by performance gateways monitoring I/O paths between hosts and storage volumes, (paragraph 0048, lines 1-4 and 11-13).

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11.   Claims 2, 7, 18, 20, 24, 30, 32, 36-37 and 46 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Koclanes et al. (US Patent Application No. 2004/0243699)

as applied to claims 1, 5, 19, 23, 31 and 35 above, and further in view of Bradley et al.

(US Patent No. 7,082,463).

In reference to claims 2, 20 and 32, Koclanes teaches the system and method as

disclosed in claim 1, 19 and 31:

Koclanes explicitly teaches the limitations as disclosed above except for the limitations

of:

each service level guarantee definition is implemented as a separate element in

at least one Extended Markup Language (XML) document,

the element for the service level guarantee includes the performance criteria

defined in the service level agreement, and

wherein the application service connection definition for each connection is

implemented as an element in a at least one XML document,

wherein the attributes of the application service connection element provide

information on the connection.

The general concept of a service level guarantee definition implemented as a separate

element in an XML document, is well known within the art as illustrated by Bradley

which discloses the use of a service level guarantee definition implemented as a

separate element in an XML document, (Bradley, column 12, Table 4, column 9, line 29,

'Standardized Interface Templates' paragraph and column 7, lines 5-7), and falls within

the realm of common knowledge as obvious design optimization and a widely available

format.

It would have been obvious for one of ordinary skill in the art at the time of the invention

to modify Koclanes to include the use of a service level guarantee definition

implemented as a separate element in an XML document as taught by Bradley in order

to make use of the well known concept of a service level guarantee definition

implemented as a separate element in an XML document as stated in claims 2, 20 and

32.

The general concept of including the performance criteria of the element in the XML

document, is well known within the art as illustrated by Bradley which discloses the use

of including the performance criteria of the element in the XML document, (Bradley,

column 13, Table 5), and falls within the realm of common knowledge as obvious design

optimization.

It would have been obvious for one of ordinary skill in the art at the time of the invention

to modify Koclanes to include the use of including the performance criteria of the

element in the XML document as taught by Bradley in order to make use of the well

known concept of including the performance criteria of the element in the XML

document as stated in claims 2, 20 and 32.

The general concept of the connection definition implemented as an element in an XML

document, is well known within the art as illustrated by Bradley which discloses the use

of the connection definition implemented as an element in an XML document, (Bradley,

column 12, Table 4, metric), and falls within the realm of common knowledge as obvious design optimization.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Koclanes to include the use of the connection definition implemented as an element in an XML document as taught by Bradley in order to make use of the well known concept of the connection definition implemented as an element in an XML document as stated in claims 2, 20 and 32.

The general concept of the element attributes providing connection information, is well known within the art as illustrated by Bradley which discloses the use of the element attributes providing connection information, (Bradley, column 14, Table 7), and falls within the realm of common knowledge as obvious design optimization.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Koclanes to include the use of the element attributes providing connection information as taught by Bradley in order to make use of the well known concept of the element attributes providing connection information as stated in claims 2, 20 and 32.

In reference to claims 7, 24 and 36-37, Koclanes teaches the method as disclosed in claims 1, 5, 19, 23, 31 and 35 wherein claim 37 further comprises:

providing a service level commitment record associating one service level agreement definition with at least one application service group, (Koclanes, paragraph 0037, lines 1-5).

Koclanes explicitly teaches the limitations as disclosed above except for the limitations of:

at least one Extended Markup Language (XML) document includes one element for each application service group, and

wherein the element for each application service group includes one sub-element for each application service connection included in that application service group,

wherein each application service connection sub-element includes attributes providing information on the application service connection.

The general concept of including one element for each service group in an XML document, is well known within the art as illustrated by Bradley which discloses the use of including one element for each service group in an XML document, (Bradley, column 12, Table 4, a metric), and falls within the realm of common knowledge as obvious design optimization.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Koclanes to include the use of including one element for each service group in an XML document as taught by Bradley in order to make use of the well known concept of including one element for each service group in an XML document as stated in claims 7, 24 and 36-37.

The general concept of including one sub-element for each application service group, is well known within the art as illustrated by Bradley which discloses the use of including one sub-element for each application service group, (Bradley, column 12, Table 4), and falls within the realm of common knowledge as obvious design optimization.

It would have been obvious for one of ordinary skill in the art at the time of the invention

to modify Koclanes to include the use of including one sub-element for each application

service group as taught by Bradley in order to make use of the well known concept of

including one sub-element for each application service group as stated in claims 7, 24

and 36-37.

The general concept of each sub-element including attributes, is well known within the

art as illustrated by Bradley which discloses the use of each sub-element including

attributes, (Bradley, column 13-23, see each table defining elements and sub-

elements), and falls within the realm of common knowledge as obvious design

optimization.

It would have been obvious for one of ordinary skill in the art at the time of the invention

to modify Koclanes to include the use of each sub-element including attributes as taught

by Bradley in order to make use of the well known concept of each sub-element

including attributes as stated in claims 7, 24 and 36-37.

In reference to claims 18, 30 and 46, Koclanes teaches the method as disclosed

in claims 1, 19 and 31 wherein claims 18, 30 and 46 further comprises:

the application service connections, (paragraph 0033, lines 1-3),

service level guarantees, service level guarantee definitions, (paragraph 0017,

lines 4-5),

application service definitions information, (paragraph 0037, lines 1-5), and

the monitoring of the I/O requests, (paragraph 0048, lines 1-4).

Koclanes explicitly teaches the limitations as disclosed above except for the limitations of:

are provided by a server in a web service architecture that interfaces with a client to provide real time performance information on the I/O paths to the client.

The general concept of using a web service architecture for real time performance on I/O paths, is well known within the art as illustrated by Bradley which discloses the use of using a web service architecture for real time performance on I/O paths, (Bradley, column 3, lines 61-62, column 4, lines 32-34), and falls within the realm of common knowledge as obvious design optimization.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Koclanes to include the use of using a web service architecture for real time performance on I/O paths as taught by Bradley in order to make use of the well known concept of using a web service architecture for real time performance on I/O paths as stated in claims 18, 30 and 46.

12.   Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koclanes et al. (US Patent Application No. 2004/0243699) as applied to claims 1 and 16 above, and further in view of Ng et al. (US Patent Application No. 2004/0049564).

In reference to claim 17, Koclanes teaches the method as disclosed in claims 1 and 16 wherein claim 17 further comprises:

the network comprises a Storage Area Network (SAN), (paragraph 0033, lines 1-3) and

Koclanes explicitly teaches the limitations as disclosed above except for the limitations of:

the performance gateways are implemented in a virtualization controller, and

wherein the storage volumes comprise logical volumes in a virtualization layer

implemented in the virtualization controller.

The general concept of performance gateways implemented in a virtualization

controller, is well known within the art as illustrated by Ng which discloses the use of

performance gateways implemented in a virtualization controller, (Ng, paragraph 0043),

and falls within the realm of common knowledge as obvious design optimization.

It would have been obvious for one of ordinary skill in the art at the time of the invention

to modify Koclanes to include the use of performance gateways implemented in a

virtualization controller as taught by Ng in order to make use of the well known concept

of performance gateways implemented in a virtualization controller as stated in claim

17.

The general concept of the storage volumes comprise logical volumes in a virtualization

layer implemented in the virtualization controller, is well known within the art as

illustrated by Ng which discloses the use of the storage volumes comprise logical

volumes in a virtualization layer implemented in the virtualization controller, (Ng,

paragraph 0034, lines 4-5), and falls within the realm of common knowledge as obvious

design optimization.

It would have been obvious for one of ordinary skill in the art at the time of the invention

to modify Koclanes to include the use of the storage volumes comprise logical volumes

in a virtualization layer implemented in the virtualization controller as taught by Ng in

order to make use of the well known concept of the storage volumes comprise logical

volumes in a virtualization layer implemented in the virtualization controller as stated in

claim 17.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to William J. Goodchild whose telephone number is (571)

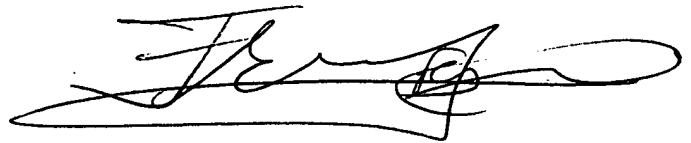270-1589. The examiner can normally be reached on Monday - Friday / 8:30 AM - 5:00

PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Frantz Jules can be reached on (571) 272-6681. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

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William J Goodchild
Examiner
Art Unit 2109

FRANTZ JULES
SUPERVISORY PATENT EXAMINER

WJG
03/30/2007